

Abstract

A method for manufacturing engineered tissue wherein a sample of normal tissue specimens obtained from a subset of a population of subjects with shared characteristics is profiled in order to generate a plurality of structural indices that correspond to statistically significant representations of characteristics of tissue associated with the population. The structural indices include cell density, matrix density, blood vessel density and layer thickness. An engineered tissue design is then formed in accordance with the structural indices, and engineered tissue is manufactured in accordance with the engineered tissue design. The sample of normal tissue specimens obtained from the subset of the population of subjects with shared characteristics can also be profiled in order to generate a plurality of cell function and/or mechanical indices that correspond to statistically significant representations of characteristics of tissue associated with the population, and the engineered tissue design used for manufacturing of tissue can be formed in accordance with such cell function and/or mechanical indices.